AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1.   (currently amended): A digital audio signal encoding method comprising:

(a) performing a time-frequency transformation based on an input audio signal[[,]] and generating a time-frequency band table by dividing the transformed input audio signal into a plurality of frequency blocks in each frame and a time-frequency index combination;

(b) based on the generated time-frequency band table, searching for a nearest neighbor block of a block being currently encoded, and generating information on the nearest neighbor block; and

(c) generating a bitstream containing the generated information on the nearest neighbor block.

2.   (original): The method of claim 1, wherein in step (b) the frequency of a block being currently encoded is equal to or greater than a threshold frequency, and the bitstream generated in step (c) includes block information on a block included in a frequency band lower than the threshold frequency and nearest neighbor block information of a block included in a frequency band equal to or higher than the threshold frequency.

3.   (original): The method of claim 1, wherein the nearest neighbor block information is index information of the nearest neighbor block, which is searched for, in the time-frequency band table.

4.   (original): The method of claim 1, wherein in step (b) a search scope of the nearest neighbor block includes blocks previous to the block being currently encoded.

5.   (original): The method of claim 1, wherein in step (b) determination of the nearest neighbor block is based on the Euclidian distance between the current block and an object block.

6.   (original): The method of claim 1, wherein the nearest neighbor block information includes scale factor information.

7.   (currently amended): A digital audio signal encoding method comprising:

(a) performing a time-frequency transformation based-on an input audio signal[[,]] and generating a time-frequency band table by dividing the transformed input audio signal into a plurality of frequency blocks in each frame and a time-frequency index combination;

(b) based on the generated time-frequency band table, searching for a nearest neighbor block of a block being currently encoded;

(c) based on the nearest neighbor block searched for, determining whether or not a block being currently encoded is a redundant block; and

(d) based on the result determined in step (c), generating an output bitstream.

8.   (original): The method of claim 7, wherein if it is determined in step (c) that the block being currently encoded is the redundant block, the bitstream generated in step (c) includes nearest neighbor block information on the nearest neighbor block searched for in step (b), instead of current block information.

9.   (original): The method of claim 8, wherein the nearest neighbor block information is index information of the nearest neighbor block, which is searched for in the time-frequency band table.

10.   (original): The method of claim 7, wherein if it is determined in step (c) that the block being currently encoded is not the redundant block, the bitstream generated in step (d) includes current block information.

11.   (original): The method of claim 7, wherein in step (b) a search scope of the nearest neighbor block includes blocks previous to the block being currently encoded.

12.   (original): The method of claim 7, wherein in step (b) determination of the nearest neighbor block is based on the Euclidian distance between the current block and an object block.

13.   (original): The method of claim 7, wherein the nearest neighbor block information includes scale factor information.

14.   (currently amended): A digital audio signal encoding apparatus comprising:

a time-frequency band table generation unit which, ~~based on an input audio signal,~~ generates a time-frequency band table <u>by dividing an input audio signal, on which time-frequency transformation is performed, into a plurality of frequency blocks in each frame and a time-frequency index combination</u>;

a nearest neighbor block searching and nearest neighbor block information generation unit which, based on the generated time-frequency band table, searches for a nearest neighbor

block of a block being currently encoded, and generates information on the nearest neighbor

block; and

a bitstream packing unit which generates a bitstream containing the generated

information on the nearest neighbor block.

15.   (original): The apparatus of claim 14, wherein the frequency of the block being

currently encoded is equal to or greater than a threshold frequency, and the bitstream packing

unit generates a bitstream including block information on a block included in a frequency band

lower than the threshold frequency and nearest neighbor block information of a block included in

a frequency band equal to or higher than the threshold frequency.

16.   (original): The apparatus of claim 14, wherein the nearest neighbor block

information is index information of the nearest neighbor block, which is searched for in the time-

frequency band table.

17.   (currently amended): A digital audio signal encoding apparatus comprising:

a time-frequency band table generation unit which, based on an input audio signal,

generates a time-frequency band table by dividing an input audio signal, on which time-

frequency transformation is performed, into a plurality of frequency blocks in each frame and a

time-frequency index combination;

a nearest neighbor block searching unit which, based on the generated time-frequency

band table, searches for a nearest neighbor block of a block being currently encoded;

a redundant block decision unit which, based on the nearest neighbor block, determines whether or not the block being currently encoded is a redundant block; and

a bitstream generation unit which, based on the result determined in the redundant block decision unit, generates an output bitstream.

18.   (original): The apparatus of claim 17, wherein, if the redundant block decision unit determines that the block being currently encoded is the redundant block, the bitstream generation unit includes information on the nearest neighbor block which is searched for in the nearest neighbor block searching unit, in the output bitstream instead of current block information.

19.   (original): The apparatus of claim 17, wherein if the redundant decision unit determines that the block being currently encoded is not the redundant block, the bitstream generation unit includes the current block information in the output bitstream.

20.   (original): The apparatus of claim 18, wherein the nearest neighbor block information is index information of the nearest neighbor block, which is searched for in the time-frequency band table.

21.   (currently amended): A decoding method for decoding an audio signal containing additional information on a predetermined region of the audio signal, comprising:

(a) decoding a block which is not included in the predetermined region, from an input audio bitstream;

(b) <u>performing a time-frequency transformation</u> ~~based~~ on the decoded block data[[,]] <u>and</u>

generating a time-frequency band table <u>by dividing the transformed decoded block data into a</u>

<u>plurality of frequency blocks in each frame and a time-frequency index</u>

<u>combination</u>~~corresponding to the predetermined region~~; and

(c) by using the generated time-frequency band table, reconstructing a current block

included in the predetermined region, based on the additional information on the predetermined

region of the audio signal.

22.   (original): The method of claim 21, wherein the additional information includes

index information on a nearest neighbor block of a current block in the predetermined region.

23.   (original): The method of claim 21, wherein the predetermined region is a high

frequency region.

24.   (original): The method of claim 21, wherein the time-frequency band table

generated in step (b) is updated by the current block reconstructed in step (c).

25.   (original): The method of claim 21, wherein the additional information includes

scale factor information.

26.   (currently amended): A decoding method for decoding a digital audio signal

comprising:

(a) extracting nearest neighbor block information from an input audio bitstream;

(b) performing a time-frequency transformationbased on the input audio bitstream[[,]] and generating a time-frequency band table by dividing the transformed input audio bitstream into a plurality of frequency blocks in each frame and a time-frequency index combination;

(c) based on the extracted nearest neighbor block information, determining whether or not a block being currently decoded is a redundant block; and

(d) if the block being currently decoded is the redundant block, by using the generated time-frequency band table, reconstructing the redundant block based on the extracted nearest neighbor block information.

27.   (original): The method of claim 26, further comprising reconstructing an entire spectrum corresponding to the input audio bitstream by using the reconstructed redundant block.

28.   (original): The method of claim 27, wherein step (c) further comprises:

updating the time-frequency band table based on the reconstructed redundant block.

29.   (original): The method of claim 27, wherein the nearest neighbor block information includes scale factor information.

30.   (currently amended): A decoding apparatus for decoding an audio signal containing additional information on a predetermined region of the audio signal, comprising:

a decoding unit which decodes a block which is not included in the predetermined region, from an input audio bitstream; and

a post-processing unit which, performs a time-frequency transformation based on the decoded block data[[,]] and generates a time-frequency band table by dividing the transformed

decoded block data into a plurality of frequency blocks in each frame and a time-frequency index combination, ~~corresponding to the predetermined region,~~ and by using the generated time-frequency band table, reconstructs a current block included in the predetermined region, based on the additional information on the predetermined region of the audio signal.

31.   (original): The apparatus of claim 30, wherein the additional information includes index information on a nearest neighbor block of a current block in the predetermined region.

32.   (original): The apparatus of claim 30, wherein the predetermined region is a high frequency region.

33.   (original): The apparatus of claim 30, wherein the generated time-frequency band table is updated by a reconstructed current block.

34.   (currently amended): A decoding apparatus for decoding a digital audio signal comprising:

a nearest neighbor block information extracting unit which extracts nearest neighbor block information from an input audio bitstream;

a time-frequency band table generation unit which, performs a time-frequency transformation ~~based~~ on the input audio bitstream[[,]] and generates a time-frequency band table by dividing the transformed input audio bitstream into a plurality of frequency blocks in each frame and a time-frequency index combination; and

a redundant block reconstruction unit which, based on the extracted nearest neighbor block information, determines whether or not a block being currently decoded is a redundant

block, and if the block being currently decoded is the redundant block, by using the generated time-frequency band table, the redundant block reconstruction unit reconstructs the redundant block based on the extracted nearest neighbor block information.

35.   (original): The apparatus of claim 34, wherein the redundant block reconstruction unit reconstructs an entire spectrum corresponding to the input audio bitstream by using the reconstructed redundant block.

36.   (original): The apparatus of claim 35, wherein the time-frequency band table generation unit updates the time-frequency band table based on the reconstructed redundant block.